Amendments to the Claims

This listing of claims will replace all prior revisions and listings of claims in this application.

Listing of Claims

1   1. (Currently Amended) A method of estimating a pose of a human head in natural scenes
2   comprising the steps of:
3   generating, a sparse representation of a human face by transforming a raw facial
4   image into sets of vectors representing fits of the face comprising fits of whole facial
5   features that represent the geometry (position, size and orientation) of the features, to a
6   random, sparse set of model configurations; wherein the sparse representation is a
7   collection of projections to a number of randomly generated possible configurations of
8   the human face, wherein irrelevant variations of face appearance are suppressed by the
9   application of filters whose shapes are matched to that of facial features and the filters are
10   generated to match the variety of actual facial feature shapes of individuals after an out-
11   of-plane rotation.
12   training, the sparse representation to a set of face(s) in known poses; and
13   determining, a pose of a head by comparing the trained representation(s) to a
14   facial image.

1   2. (Cancelled)

1   3. (Previously Presented) The method according to claim 1 wherein the transforming step
2   further comprises the step of:
3   collecting, salient features of the face image which are useful to estimate the pose
4   of the face.

1   4. (Cancelled)

1   5. (Currently Amended) The method according to claim [[4]] 3 wherein the training step

2   further comprises the steps of:

3   learning, using Support Vector Regression (SVR), a relation between the sparse

4   representation and the pose(s).

1   6. (Withdrawn)